

REMARKS

This Amendment is responsive to the Office Action dated May 14, 2004.

Claims 1 through 16 are pending in the application. All of the claims are presently rejected under 35 U.S.C. 102(b) as being anticipated by Black et al. U.S. Patent No. 4,253, 343. Claims 8 and 13 are additionally objected to informally as requiring - the- in front of "bolt" in line one.

Responsive to the informal objection to claims 8 and 13, those claims are herein amended as required. Applicant appreciates the Examiner's careful scrutiny of the present application.

Addressing the rejection of all of the claims under 35 U.S.C. 102(b) as being anticipated by Black et al. U.S. Patent No. 4,253, 343, Applicant respectfully traverses the rejection on the grounds that all of the elements of each of the claims are not present in the Black et al. patent, and therefore a prima facie case is not made with regard to the claims.

More particularly, addressing independent claim 1, it is directed to a bearing and shaft assembly **for mounting in an opening through a support member for supporting an end of a rotatable member for rotation relative thereto under an axial preload condition.** In the assembly of Black et al., reproduced on page 3 of the Detailed Action section of the Office Action and relied on by the Examiner, in contrast, a cutterhead shaft 34 is shown, having "fixed thereto a pulley or sheave 38 (FIGS. 2,4)" Black et al patent Col. 2, lines 46-49. No support for the end of the rotatable member (shaft 34) is shown. And, examining the reproduced Figures more carefully, shaft 34 includes an end having a keyway therein and on which is located a flange which must rotate with the shaft by virtue of the presence of a keyed connection therebetween, so as to be "fixed thereto" as required in the specification. Pulley or sheave 38 is mounted around the flange and is connected thereto by an array of bolts. As a result, all of the elements shown in the Figure are "fixed" together and must rotate together.

Claim 1 additionally requires a bolt having a threaded end portion threadedly receivable and engageable in a threaded hole in the end of the rotatable member, an opposite end portion positionable in the opening through the support member including an enlarged head having a shoulder therearound facing the threaded end portion, and **a cylindrical shaft portion** extending between the threaded and opposite end portions.

Black et discloses a bolt with a washer between the threaded portion and the bolt head, but is not clear as to a "cylindrical shaft portion" as required in the claim, and as is important for the following reasons.

Claim 1 requires a bearing having **relatively rotatable inner and outer rings**. The Figure of Black et al. shown on Page 3 of the Detailed Action does not disclose a bearing, but instead a flange and a sheave or pulley "fixed" to the shaft. None of the elements in the Figure are disclosed as being relatively rotatable. Claim 1 requires the inner ring to have oppositely facing axial ends extending around a central hole therethrough **adapted for receiving the shaft portion of the bolt**. This is not disclosed in the Figure on page 3 of the Detailed Action. Instead, in that Figure, the shaft portion of the bolt (if any) is received only in a washer, axially outwardly of the flange. Claim 1 further requires the outer ring including at least one mounting element **for mounting the bearing on a side of the support member** opposite the rotatable member in the opening through the support member. Again, the Figure of Black et al. relied on to show a bearing instead shows only a flange and a sheave or pulley, fixedly connected together by an array of bolts for rotation together, so as to lack any need for and teach away from the use of a bearing as required in the claim.

Next, claim 1 requires that the bolt is **insertable through the inner ring of the bearing** and threadedly engageable with the threaded hole of the rotatable member for holding the inner ring of the bearing thereagainst for rotation therewith while exerting an axial tensile force on the bolt. This is also not shown in the Figure relied on by the Examiner. In that Figure, the bolt extends only through the washer and is threaded directly into the end of the shaft.

Claim 1 also requires that the **outer ring is mountable in the opening through the support member, for supporting the end of the rotatable member for rotation on the support member**. Nowhere in the Figures relied on in the Detailed Action is a bolt shown holding an inner ring of a bearing against a rotatable member in combination with mounting an outer ring of the bearing in an opening through a support member, for supporting the end of a rotatable member for rotation on the support member, as required in the claim. In Fig. 3 of Black et al. two bearing of an idler are shown having inner rings mounted on a bolt on an end of an arm 50, the outer rings of the bearings supporting the idler for rotation relative to the inner rings, but this is essentially the opposite of the claimed construction, as the outer ring is the rotatable element, not the inner ring.

As a result, by virtue of the bolting and keying together of all of the components shown in the Figure depicted on page 3 of the Detailed Action, such that no relative rotation is possible, and the lack of a bearing having inner and outer relatively rotatable rings and the manner of connection thereof as required in claim 1, all of the elements of claim 1 are not shown, disclosed or suggested in the relied on Figure of Black et al. Black et al. additionally does not even appear to have an application or need for a bearing assembly such as claimed in claim 1. Therefore, Applicant respectfully asserts that a *prima facie* case of anticipation of claim 1 is not present, and thus, claim 1, and claims 2 through 5 which depend therefrom, are believed to be allowable.

Independent claim 6 is directed to **a bearing assembly** for supporting an end of a rotatable member for rotation in an interior space of an enclosure in closely spaced proximity to a support member located adjacent to the space, **for supporting the bearing assembly and the end of the rotatable member**. Claim 6 requires an elongate bolt including a cylindrical portion extending longitudinally from a larger head to a threaded end. Claim 6 requires a bearing including an inner ring and an outer ring supported around the inner ring for relative rotation therebetween, **the inner ring including a center hole therethrough adapted for receiving the cylindrical portion of the bolt, and the outer ring including at least one mounting element fixedly attachable to a**

portion of the support member external to the interior space for mounting the outer ring in or over an opening through the support member. As asserted above, the elements of Black et al. shown in the Figure on page 3 of the Detailed Action and relied on to disclose such a bearing arrangement do not at all constitute a bearing, and, in fact, represent an assembly keyed and bolted or "fixed" together for joint rotation.

Again, by virtue of the bolting and keying together of all of the components shown in the Figure depicted on page 3 of the Detailed Action, such that no relative rotation is possible, and the lack of a bearing having inner and outer relatively rotatable rings and the manner of connection thereof as required in claim 6, all of the elements of claim 6 are not shown, disclosed or suggested in Black et al. Black et al. additionally does not even appear to have an application or need for a bearing assembly such as claimed in claim 6. Therefore, Applicant respectfully asserts that a prima facie case of anticipation of claim 6 is not present, and thus, claim 6, and claims 7 through 10 which depend therefrom, are believed to be allowable.

Independent claim 11 is directed to an externally installable and removable preloaded bearing and shaft assembly for supporting an end of a rotatable member of a feeder assembly of an agricultural combine, for rotation in an interior space in close proximity to a side of an enclosure of the feeder assembly. Claim 11 requires the bearing and shaft assembly to include an elongate bolt including a cylindrical shaft portion extending longitudinally from a larger head to a threaded end, and **a bearing including an inner ring and an outer ring supported around the inner ring for relative rotation therebetween, the inner ring including a center hole therethrough adapted for receiving the shaft portion of the bolt, and the outer ring including at least one mounting element fixedly attachable to the side of the enclosure external to the interior space for mounting the outer ring in or over an opening through the side of the enclosure.** Claim 11 further requires the threaded end of the bolt be insertable from the exterior of the enclosure through the center hole of the inner ring of the bearing and receivable in a threaded hole in the end of the rotatable member in the interior space and

tightenable in the threaded hole with the outer ring mounted in or over an opening through the side of the enclosure, for holding the inner ring against the end of the rotatable member for rotation therewith and for applying a tensile preloading force longitudinally through the bolt.

Again, for many of the reasons set forth above in regard to claims 1 and 6 and incorporated herein by reference, namely, by virtue of the bolting and keying together of all of the components shown in the Figure depicted and relied on in page 3 of the Detailed Action, such that no relative rotation is possible, and the lack of a bearing having inner and outer relatively rotatable rings and the manner of connection thereof as required in claim 11, all of the elements of claim 11 are not shown, disclosed or suggested in Black et al. Black et al. additionally does not even appear to have an application or need for a bearing and shaft assembly such as claimed in claim 11. Therefore, Applicant respectfully asserts that a *prima facie* case of anticipation of claim 11 is not present, and thus, claim 11, and claims 12 through 16 which depend therefrom, are believed to be allowable.

None of the prior art references cited in the Detailed Action disclose, teach or suggest a bearing and shaft assembly as set forth in the present claims, nor the resultant preload achieved thereby which is also claimed. Accordingly, favorable action and allowance of the claims is respectfully requested.

A one month extension of time is requested to extend the time for submitting this Amendment. The Office Action was mailed on May 14, 2004, and the initial three month period in which to submit a response ended on August 14, 2004. The one month extension of time extends the response time up to and including September 14, 2004. Enclosed is a check in the amount of \$110.00 which is the charge for an extension of one month as set forth in 37 CFR §1.17(a)(2) for a large entity. The Commissioner is authorized to charge any credit or deficiency to Deposit Account No. 08-1280.

If the Examiner has any further requirements or suggestions for placing the present claims in condition for allowance, Applicant's undersigned attorney would appreciate a telephone call at the number listed below.

Respectfully submitted,

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